

IN THE CLAIMS:

Please cancel claims 1-7 without prejudice.

1.- 7. (Cancelled)

8. (Original) A light source, being characterized by:
emitting light whose whiteness is no smaller than 85 and whose visual clarity
index is no smaller than 110, the whiteness W being calculated using chroma C of the light and
an equation (3),

$$W = -5.3C + 100 \dots (3)$$

wherein the chroma C is calculated using a method defined by the CIE 1997
Interim Color Appearance Model (Simple Version).

9. (Original) The light source of Claim 8,

wherein the light source is a fluorescent lamp containing a phosphor layer, the
light source emitting light whose peak emissions are in four wavelength ranges of 440nm to
470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an
inequality (4) for a correlated color temperature $T[K]$

$$Qg / Qv \geq -0.11 \times 10^4 / T + 0.30 \dots (4)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant
energy Qg in a wavelength of 505nm to 530nm.

10. (Original) The light source of Claim 9,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent Europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;

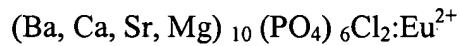
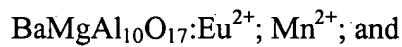
a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

11. (Original) The light source of Claim 10,

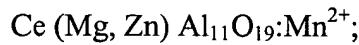
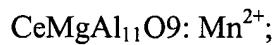
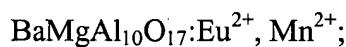
wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

12. (Original) The light source of Claim 10,

wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:



Zn_2SiO_4 : Mn^{2+} ; and

$\text{CeMgAl}_{11}\text{O}_{19}$: Tb^{3+} , Mn^{2+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

13. (Original) The light source of Claim 10,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

LaPO_4 : Ce^{3+} , Tb^{3+} ; and

$\text{CeMgAl}_{11}\text{O}_{19}$: Tb^{3+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

14. (Original) The light source of Claim 10,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

Y_2O_3 : Eu^{3+} ; and

Gd_2O_3 : EU^{3+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

15. (Original) The light source of Claim 9,

wherein the phosphor layer has, as major components:

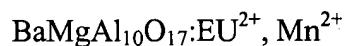
a phosphor containing both bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm.

16. (Original) The light source of Claim 15,

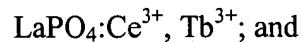
wherein the phosphor containing the bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm is



wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

17. (Original) The light source of Claim 15,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

18. (Original) The light source of Claim 15,
wherein the phosphor containing the trivalent europium as an emission center and
having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one
of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

19. (Original) The light source of Claim 9,
wherein the phosphor layer contains, as major components:
a phosphor containing bivalent europium as an emission center and having an
emission peak at 440nm to 470nm;
a phosphor containing both trivalent terbium and bivalent manganese as emission
centers and having emission peaks both at a wavelength range of 505nm to 530nm and at 540nm
to 570nm; and
a phosphor containing trivalent europium as an emission center and having an
emission peak at 600nm.

20. (Original) The light source of Claim 19,
wherein the phosphor containing the bivalent europium as an emission center and
having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}$;

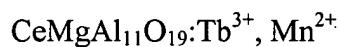
$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}; \text{Mn}^{2+}$; and

$(\text{Ba, Ca, Sr, Mg})_{10}(\text{PO}_4)_6\text{Cl}_2:\text{Eu}^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

21. (Original) The light source of Claim 19,

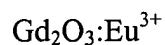
wherein the phosphor containing the trivalent terbium and the bivalent manganese as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm and at 540nm to 570nm is



wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

22. (Original) The light source of Claim 19,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

23. (Original) A light source, being characterized by:

emitting light whose whiteness W is no smaller than 85, and whose visual clarity index is no smaller than 115, the whiteness W being calculated using chroma C of the light and an equation(5)

$$W = -5.3C + 100 \dots (5)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 InterimColor Appearance Model (Simple Version).

24. (Original) The light source of Claim 23,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470 nm, 505 nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and
wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an inequality (6) for a correlated color temperature $T[K]$

$$Qg / Qv \geq -0.11 \times 10^4 / T + 0.30 \dots (6)$$

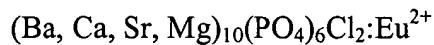
wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

25. (Original) The light source of Claim 24,

wherein the phosphor layer contains, as major components:
a phosphor containing bivalent Europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;
a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;
a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and
a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

26. (Original) The light source of Claim 25,

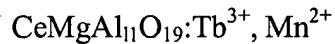
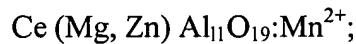
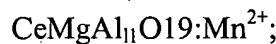
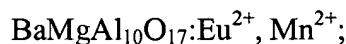
wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

27. (Original) The light source of Claim 25,

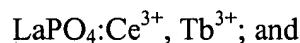
wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

28. (Original) The light source of Claim 25,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

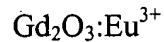




wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

29. (Original) The light source of Claim 25,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

30. (Original) The light source of Claim 24,

wherein the phosphor layer has, as major components:

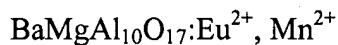
a phosphor containing both bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm.

31. (Original) The light source of Claim 30,

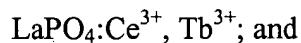
wherein the phosphor containing the bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm is



wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

32. (Original) The light source of Claim 30,

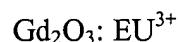
wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

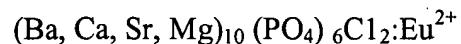
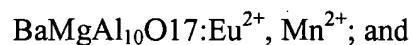
33. (Original) The light source of Claim 30,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:



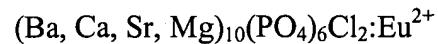
wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

34. (Original) The light source of Claim 24,
wherein the phosphor containing the bivalent europium as an emission center and
having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:



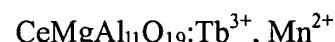
wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

35. (Original) The light source of Claim 34,
wherein the phosphor containing the bivalent europium as an emission center and
having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

36. (Original) The light source of Claim 34,
wherein the phosphor containing the trivalent terbium and the bivalent manganese
as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm
and at 540nm to 570nm is



wherein a compound on the left side denotes a host crystal, and ions on the right
side are emission centers contained in the phosphor.

37. (Original) The light source of Claim 34,
wherein the phosphor containing the trivalent europium as an emission center and
having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one
of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

38. (Original) A light source, being characterized by:
emitting light whose whiteness is no smaller than 65 obtained when the light is
reflected from a blank surface of a newspaper, the whiteness being calculated using chroma C of
the light and an equation (7),

$$W = -3.3C + 100 \dots (7)$$

wherein the chroma C is calculated using a method defined by the CIE 1997
Interim Color Appearance Model (Simple Version);
emitting light whose chromaticity is, on the CIE 1931 chromaticity diagram, in a
range expressed by two equations (8) and (9); and
emitting light whose visual clarity index is no smaller than 110:

$$y \geq -2.63x^2 + 2.63x - 0.263 \dots (8)$$

$$y \geq -3.09x + 1.22 \dots (9).$$

39. (Original) The light source of Claim 38,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfy an inequality (4) for a correlated color temperature $T[K]$

$$Qg/Qv \geq -0.11 \times 10^4/T + 0.30 \dots (4)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

40. (Original) The light source of Claim 39,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;

a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and

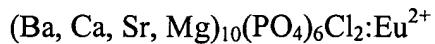
a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

41. (Original) The light source of Claim 40,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}$;

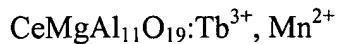
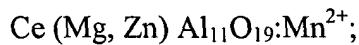
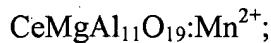
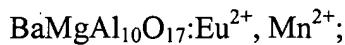
$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$; and



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

42. (Original) The light source of Claim 40,

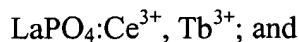
wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

43. (Original) The light source of Claim 40,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

44. (Original) The light source of Claim 40,
wherein the phosphor containing the trivalent europium as an emission center and
having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one
of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

45. (Original) The light source of Claim 39,
wherein the phosphor layer has, as major components:
a phosphor containing both bivalent europium and bivalent manganese as
emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and
at 505nm to 530nm;
a phosphor containing trivalent terbium as an emission center and having an
emission peak at a wavelength range to 570nm; and
a phosphor containing trivalent europium as an emission center and having an
emission peak at a wavelength range of 600 nm to 620nm.

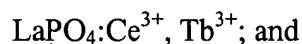
46. (Original) The light Source of Claim 45,
wherein the phosphor containing the bivalent europium and bivalent manganese
as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm
and at 505nm to 530nm is

$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

47. (Original) The light source of Claim 45,

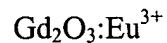
wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

48. (Original) The light source of Claim 45,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

49. (Original) The light source of Claim 39,

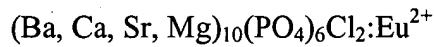
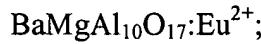
wherein the phosphor layer contains, as major components:
a phosphor containing bivalent europium as an emission center and having an emission peak at 440nm to 470nm;

a phosphor containing both trivalent terbium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 505nm to 530nm and at 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at 600nm.

50. (Original) The light source of Claim 49,

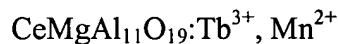
wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

51. (Original) The light source of Claim 49,

wherein the phosphor containing the trivalent terbium and the bivalent manganese as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm and at 540nm to 570nm is



wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

52. (Original) The light source of Claim 49,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

53. (Original) A light source, characterized by:

emitting light whose whiteness W is no smaller than 65 when the light is reflected from a blank surface of a newspaper, the whiteness W being calculated using chroma C of the light and an equation (11),

$$W = -3.3C + 100 \dots (11)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color Appearance Model (Simple Version);

emitting light whose chromaticity is, on the CIE 1931 chromaticity diagram, in a range expressed by two equations (12) and (13); and

emitting light whose visual clarity index is no smaller than 115:

$$y \geq -2.63x^2 + 2.63x - 0.263 \dots (12)$$

$$y \geq -3.09x + 1.22 \dots (13).$$

54. (Original) The light source of Claim 53,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfy an inequality (14) for a correlated color temperature $T[K]$

$$Qg / Qv \geq -0.11 \times 10^4 / T + 0.30 \dots (14)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

55. (Original) The light source of Claim 54,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent Europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;

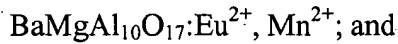
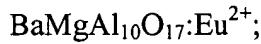
a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;

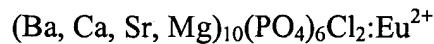
a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

56. (Original) The light source of Claim 55,

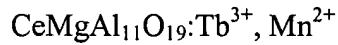
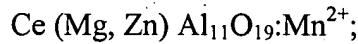
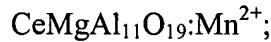
wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:





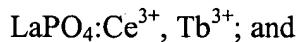
wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

57. (Original) The light source of Claim 55,
wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

58. (Original) The light source of Claim 55,
wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:



wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

59. (Original) The light source of Claim 55,
wherein the phosphor containing the trivalent europium as an emission center and
having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one
of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side
are emission centers contained in the phosphors.

60. (Original) The light source of Claim 54,
wherein the phosphor layer has, as major components:
a phosphor containing both bivalent europium and bivalent manganese as
emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and
at 505nm to 530nm;
a phosphor containing trivalent terbium as an emission center and having an
emission peak at a wavelength range of 540nm to 570nm; and
a phosphor containing trivalent europium as an emission center and having an
emission peak at a wavelength range of 600nm to 620nm.

61. (Original) The light source of Claim 60,
wherein the phosphor containing the bivalent europium and bivalent manganese
as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm
and at 505nm to 530nm is

$\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

62. (Original) The light source of Claim 60,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

$\text{LaPO}_4:\text{Ce}^{3+}, \text{Tb}^{3+}$; and

$\text{CeMgAl}_{11}\text{O}_{19}:\text{Tb}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

63. (Original) The light source of Claim 60,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

64. (Original) The light source of Claim 54,

wherein the phosphor layer contains, as major components:
a phosphor containing bivalent europium as an emission center and having an emission peak at 440nm to 470nm;

a phosphor containing both trivalent terbium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 505nm to 530nm and at 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at 600nm.

65. (Original) The light source of Claim 64,
wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

BaMgAl₁₀O₁₇: EU²⁺;

BaMgAl₁₀O₁₇: EU²⁺, Mn²⁺; and

(Ba, Ca, Sr, Mg) 10 (P₀₄) 6C₁₂: EU²⁺

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

66. (Original) The light source of Claim 64,
wherein the phosphor containing the trivalent terbium and the bivalent manganese as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm and at 540nm to 570nm is

CeMgAl₁₁O₁₉: Tb³⁺, Mn²⁺

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

67. (Original) The light source of Claim 64,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; and

$\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

68. (Original) A luminaire, being characterized by:

emitting light whose whiteness is no smaller 85 and whose visual clarity index is no smaller than 110, the whiteness W being calculated using chroma C of the light and an equation (15),

$$W = -5.3C + 100 \dots (15)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color Appearance Model (Simple Version).

69. (Original) The luminaire of Claim 68,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Q_v to a radiant energy Q_g satisfies an inequality (16) for a correlated color temperature $T[\text{K}]$

$$Q_g/Q_v \geq -0.11 \times 10^4/T + 0.30 \dots (16)$$

wherein the radiant energy Q_v is in a wavelength of 380nm to 780nm and radiant energy Q_g in a wavelength of 505nm to 530nm.

70. (Original) The luminaire of Claim 68,
wherein the light from the light source is adjusted to a specified spectrum after passing
through the translucent cover.

71. (Original) The luminaire of Claim 68,
wherein the light from the light source is adjusted to a specified spectrum after
reflected from the reflector.

72. (Original) A luminaire, being characterized by:
emitting light whose whiteness W is no smaller than 85, and whose visual clarity
index is no smaller than 115, the whiteness W being calculated using chroma C of the light and
an equation (17)

$$W = -5.3C + 100 \dots (17)$$

wherein the chroma C is calculated using a method defined by the CIE 1997
InterimColor Appearance Model (Simple Version).

73. (Original) The luminaire of Claim 72,
wherein the light source is a fluorescent lamp containing a phosphor layer, the
light source emitting light whose peak emissions are in four wavelength ranges of 440nm to
470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm and
wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an
inequality (18) for a correlated color temperature $T[K]$

$$Qg/Qv \geq -0.11 \times 10^4/T + 0.30 \dots (18)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant
energy Qg in a wavelength of 505nm to 530nm.

74. (Original) The luminaire of Claim 72,
wherein the light from the light source is adjusted to a specified spectrum after
passing through the translucent cover.

75. (Original) The luminaire of Claim 72,
wherein the light from the light source is adjusted to a specified spectrum after
reflected from the reflector.

76. (Original) A luminaire, being characterized by:
emitting light whose whiteness is no smaller than 65 obtained when the light is
reflected from a blank surface of a newspaper, the whiteness being calculated using chroma C of
the light and an equation (19),

$$W = -3.3C + 100 \dots (19)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color
Appearance Model (Simple Version);

emitting light whose chromaticity is, on the CIE 1931 chromaticity diagram, in a
range expressed by two equations (20) and (21); and

emitting light whose visual clarity index is no smaller than 110:

$$y \geq -2.63x^2 + 2.63x - 0.263 \dots (20)$$

$$y \geq 3.09x + 1.22 \dots (21).$$

77. (Original) The luminaire of Claim 76,
wherein the light source is a fluorescent lamp containing a phosphor layer, the
light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470
nm, 505 nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfy an inequality

(22) for a correlated color temperature $T[K]$

$$Qg/Qv \geq -0.11 \times 10^4/T + 0.30 \dots (22)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

78. (Original) The luminaire of Claim 76,

wherein the light from the light source is adjusted to a specified spectrum after passing through the translucent cover.

79. (Original) The luminaire of Claim 76,

wherein the light from the light source is adjusted to a specified spectrum after reflected from the reflector.

80. (Original) A luminaire, being characterized by:

emitting light whose whiteness W is no smaller than 65 when the light is reflected from a blank surface of a newspaper, the whiteness W being calculated using chroma C of the light and an equation (23),

$$W = -3.3C + 100 \dots (23)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color Appearance Model (Simple Version);

emitting light whose chromaticity is, on the CIE 1931 chromaticity diagram, in a range expressed by two equations (24) and (25); and

emitting light whose visual clarity index is no smaller than 115:

$$y \geq -2.63x^2 + 2.63x - 0.263 \dots (24)$$

$$y \geq -3.09x + 1.22 \dots (25).$$

81. (Original) The luminaire of Claim 80,
wherein the light source is a fluorescent lamp containing a phosphor layer, the
light source emitting light whose peak emissions are in four wavelength ranges of 440nm to
470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and
wherein a ratio of a radiant energy Qv to a radiant Qg satisfy an inequality (26)
for a correlated color temperature $T[K]$

$$Qg/Qv \geq -0.11 \times 10^4/T + 0.30 \dots (26)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant
energy Qg in a wavelength of 505nm to 530nm.

82. (Original) The luminaire of Claim 80,
wherein the light from the light source is adjusted to a specified spectrum after
passing through the translucent cover.

83. (Original) The luminaire of Claim 80,
wherein the light from the light source is adjusted to a specified spectrum after
reflected from the reflector.